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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 832,116	04 11 2001	Manabu Takayama	862.C2202	1587

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

YAM, STEPHEN K

ART UNIT PAPER NUMBER

2878

DATE MAILED: 07 29 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,116

Applicant(s)

TAKAYAMA ET AL.

Examiner

Stephen Yam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to a mold for an optical scale, classified in class 249, subclass 57.
 - II. Claims 7-9, drawn to the manufacturing of an optical scale, classified in class 264, subclass 1.1.
 - III. Claims 10-11, drawn to an optical encoder transmitting through an optical scale for detecting a speed, classified in class 356, subclass 616.
 - IV. Claims 12-16, drawn to an optical scale reflecting light off a light-emitting portion of a sensor, classified in class 250, subclass 231.13.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the different inventions are different because one group only teaches a mold for an optical scale and the other group only teaches the characteristics of an optical scale. Group I describes the specifics of the mold with

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fixed and movable platens with two mold portions. Group II describes an optical scale with a shaft mount hole, which can be manufactured using a variety of methods and molds.

3. Inventions I and III are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the different inventions are different because one group only teaches a mold for an optical scale and the other group only teaches an optical encoder using an optical scale constructed using the mold. Group I describes the specifics of the mold with fixed and movable platens with two mold portions. Group III describes an optical encoder emitting a light beam through a grating portion of an optical scale, which can use a plurality of different optical scales.

4. Inventions I and IV are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the different inventions are different because one group only teaches a mold for an optical scale and the other group only teaches an optical encoder using an optical scale constructed using the mold. Group I describes the specifics of the mold with fixed and movable platens with two mold portions. Group IV describes an optical scale reflecting a light beam off a reflecting portion and a shaft holding

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portion for rotating the optical scale. The optical scale can be constructed using a variety of methods and molds.

5. Inventions I and III/IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are different because Group I teaches a mold for constructing an optical scale, and Groups III and IV teach the specifics of an optical encoder and scale/sensor to emit and receive light.

6. Inventions II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because an optical encoder can use a variety of optical scales to detect position or speed. The subcombination has separate utility such as a frequency modulator to pulse a light beam.

7. Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are different because one group teaches an optical scale with specific characteristics and the other group teaches an optical scale and a sensor with a light-emitting portion and a light-receiving portion. Group II also teaches the optical scale having a wavefront splitting function or a V-groove structure. Group IV also teaches the optical scale reflecting light from

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the light-emitting portion of the sensor towards the light-receiving portion, and a shaft for rotating the optical scale.

8. Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are different because one group teaches an optical encoder with an optical scale transmitting light through a grating portion and the other group teaches an optical scale reflecting light emitted from a sensor. Group III also teaches the optical encoder disposed between light radiation means and light receiving means. Group IV also teaches the sensor containing both light-emitting and light-receiving portions and emitting light to be reflected off the optical scale towards the light-receiving portion.

9. If Applicant chooses to elect Group II, the claims should be written in proper independent form. In Claim 7, it appears that Applicant intended to claim a manufacturing method for an optical scale. However, the claim does not properly claiming a manufacturing method, since it is unclear what "characterized by being manufactured" means. A proper manufacturing method claim requires steps in the manufacturing of the final product, and not just the apparatus used.

10. If Applicant chooses to elect Group III, the claims should be written in proper independent form.

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11. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

12. A telephone call was made to Justin Oliver on 6/17/02 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Yam whose telephone number is (703)306-3441. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (703)308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7724 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

SY

S.Y.

July 19, 2002



Kevin Pyo
Primary Examiner
Primary Examiner